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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BAKER BOTTS LLP 44TH FLOOR 30 ROCKEFELLER PLAZA NEW YORK, NY 10112-4498			EXAMINER HEITBRINK, JILL LYNNE	
			ART UNIT 1732	PAPER NUMBER

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,412

Applicant(s)

HOFMANN, WERNER

Examiner

Jill L. Heitbrink

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,9,12,13,18 and 22-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,10,11 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Claims 4,5,9,12,13,18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper filed Nov. 6, 2003. Elected Species A is control of plastic injection molding machine speed and pressure, paragraph [0006].
2. Newly submitted claims 22-25 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: These claims are directed to species B and C which do not interact with the screw movement and the utility of the subcombinations have separate utility as described in the office action mailed Jan. 20, 2004 and Sept. 16, 2003.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 4, 5, 9, 12, 13, 18 and 22-25 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1, 2, 6 and 19-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "said first variable" in lines 6 and 7. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 1 recites the limitation "said second variable" in line 7. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 1 recites the limitation "said positional setpoint" in line 8. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 1 recites the limitation "said correctional setpoint" in lines 8 and 9. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 1, "said correctional setpoint" in lines 8 and 9 is unclear as to the relationship with the additional correctional setpoints defined in line 10 "a first and second correctional setpoint".

10. Claim 1, "a set point" in lines 7 and 8 is unclear as to what type of set point is being defined.

11. The examiner notes that many terms defined in amended claim 1 are not used in the original specification. Therefore, the follow is being used to provide support of claim 1 in the original specification, Fig. 2.

A positional setpoint determination unit is FB1.

The first variable is x.

A correctional setpoint determination unit is AS and FB5.

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The second variable is p_{act} .

A setpoint (received by the correctional setpoint determination unit) is the output from FB4.

A machine control unit is FB6.

The positional setpoint is the output from FB1.

The correction setpoint is the output from FB5.

A first and second correctional setpoint are the output from FB5 which is received by AS (both of which are part of the correctional setpoint determination unit).

A threshold of the first variable is x_{max} .

As to claim 19, A first setpoint determination unit is FB2.

A second setpoint determination unit is FB3.

A third variable is t .

A select unit is FB4.

As to claim 20, A subtraction unit is AS.

A function unit is FB5.

As to claim 21, A first or second parameter set is Param.Set1 or Param.Set2.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1, 2, 6, 10, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Onishi, Pat. No. 6,562,261.

14. As to claims 1, 2, 6, Onishi discloses an injection molding machine including an electric servo motor drive (10,30), a control unit for controlling the drive (33), and detectors for determining at least two variable (Sfb and Pfb) fed to the control unit which are generated during the operation of the machine (col. 3, lines 55-62 and col. 4, lines 24-26), wherein the control unit comprises a positional setpoint determination unit (31-4 and 31-5) receiving said first variable (Sfb), a correctional setpoint determination unit (35-3 and 35-4) receiving the second variable (Pfb) and a setpoint (V-P switching point), and a machine control unit (31-6, 32, 33) receiving the positional setpoint and the correctional setpoint for generating a machine control parameter (col. 4, lines 35-39), wherein the correctional setpoint determination unit generates a first and second correctional setpoint depending on whether a threshold of the first variable is exceeded (switching point has been reached, see col. 4, lines 14, 15 and 40-53). As to claim 19, a second setpoint determination unit (35-3) receiving a third variable (time) is shown by the pressure time profiles of Figures 4 and 6. The computing unit 35-3 is a subtraction

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unit. SW1 and SW2 are first and second parameter sets which are received by the computing unit 31-6.

15. As to claim 10, Onishi discloses an open-loop control method of an injection molding machine for movement of the injection screw including the steps of determining (31-4) a positional setpoint (31-1) from at least a first variable (Sfb); determining (31-6) a correctional setpoint (output from 31-6) from a second variable (Pfb) and either a first or second setpoint (SW1 or SW2) depending whether a threshold of the first variable is exceeded (switching point has been reached, see col. 4, lines 14, 15 and 40-53.

16. Claims 3, 7, 8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Stroud, III et al. Pat. No. 5,062,785.

17. As to Claims 3, 7 and 8, Stroud, III et al. discloses an injection molding machine for manufacturing plastic parts by advancing a screw driving by a hydraulic pump including means for detecting and registering the injection pressure and position of the screw as measured variables during operation (col. 4, lines 60-65 and col. 5, line 66-col. 6, line 1), the screw having at least one speed/displacement profile variable and a first and second pressure profile variable which are pressure/displacement profile and pressure/time profile (col. 8, lines 24-40), wherein the at least one speed/displacement profile variable determines a setpoint value which can be counteracted by the first or second pressure profile variable depending on whether the position exceeds a predetermined threshold position (col. 9, line 43 specifically refers to ram position as the limit, col. 10, lines 1-33 provide one example of counteracting or changing profiles).

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18. As to Claims 10 and 11, Stroud, III et al. discloses a method for open-loop control of an injection molding machine including determining a positional setpoint by a speed/displacement profile first variable (col. 8, lines 24-40 and Fig. 14), determining a correctional setpoint from a second variable (pressure) and either a first or second setpoint, including pressure/displacement profile or pressure/time displacement (col. 8, lines 24-40) depending whether a threshold of the first variable is exceeded (see Fig. 4B), and generating a machine control parameter (18, 18', 19, 19' in Fig. 3) from the positional setpoint and the correctional setpoint (col. 10, lines 18-33).

Response to Arguments

19. Applicant's arguments with respect to claims 1-3, 6-8, 10, 11 and 14-17 have been considered but are moot in view of the new ground(s) of rejection. The rejection based on Hayasi has been withdrawn since the claims have been amended to include the machine control unit receiving the positional setpoint or to include whether the position exceeds a predetermined threshold position. Hayasi uses the exceeding of pressure as shown in Figures 3-5 of Hayasi.

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sasaki et al. Pat. No. 6,325,954 and Hiraoka Pat. No. 5,371,450 show correctional control loops for controlling the injection screw based on a positional variable.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is 571-272-1199. The examiner can normally be reached on Monday - Friday 9:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill L. Heitbrink
Primary Examiner
Art Unit 1732

jlh